

Name: _____

p1105: Factoring when $a = 1$ (v19)

Example: Factor $x^2 + 5x - 24$

Find two numbers whose product is -24 and whose sum is 5 . Focus on finding factor pairs of -24 . Eventually you consider 8 and -3 because $(8)(-3) = -24$. You verify this pair is correct because $(8) + (-3) = 5$. Thus, your answer:

$$(x + 8)(x - 3)$$

1. Factor $x^2 - 5x + 6$

2. Factor $x^2 + 2x - 24$

3. Factor $x^2 + 2x - 15$

4. Factor $x^2 - 12x + 36$

5. Factor $x^2 - 8x - 9$

6. Factor $x^2 + 2x - 8$

7. Factor $x^2 - 9$

8. Factor $x^2 + 12x + 35$

9. Factor $x^2 - 8x + 15$

10. Factor $x^2 + 14x + 48$

11. Factor $x^2 - 9x + 20$

12. Factor $x^2 - 16$

13. Factor $x^2 + x - 30$

14. Factor $x^2 + 12x + 27$

15. Factor $x^2 - 15x + 54$